Abstract

Subsurface utility engineering (SUE) is a process for utilizing mapping and data processing technologies to locate and identify utilities below ground surface. The convergence of new equipment and data-processing technologies now allows for cost-effective collection, mapping, depiction, and management of information regarding existing utilities. SUE has developed to become a national practice to be conducted prior to large excavations in urban areas.

But, even with the current use of SUE is widespread, but the necessity and use of and the process of SUE is still not well understood by the general public. In order to help people better understand the development and reasoning behind the use of SUE, this thesis will address these issues and the process of development of SUE.

This thesis conveys the processes, quality, and technology of SUE by explaining the one-call number system, differences between information gathered by quality levels, and technologies used for SUE. Along the way, the benefits of these systems will be demonstrated, and the process of determining when to gather information on underground utilities for a project will be discussed. This will be done by a literature review of standards and studies as well as case studies from actual construction projects showing the use of SUE to simplify the design of the project.